

CLAIMS

What is claimed is:

- 1 1. A well system, comprising:
2
3 a completion positioned in a wellbore to pump a production fluid;
4
5 a tubing coupled to the completion;
6
7 a bypass coupled to the tubing for carrying a well treatment fluid past the
8 completion; and
9
10 a diverter valve disposed in cooperation with the tubing and the bypass to
11 selectively direct either flow of the well treatment fluid through the tubing to the
12 bypass or flow of production fluid from the completion through the tubing.
- 1 2. The well system as recited in claim 1, wherein the completion comprises an
2 electric submersible pumping system.
- 1 3. The well system as recited in claim 1, wherein the tubing comprises production
2 tubing
- 1 4. The well system as recited in claim 1, wherein the bypass comprises a conduit
2 that directs fluid past the completion.
- 1 5. The well system as recited in claim 4, wherein the conduit comprises a tube.
- 1 6. The well system as recited in claim 1, wherein the diverter valve comprises a
2 flapper valve.

- 1 7. The well system as recited in claim 1, wherein the diverter valve is movable
2 between a first position blocking flow through the tubing and a second position
3 blocking flow through the bypass.
- 1 8. The well system as recited in claim 1, further comprising a packer, wherein the
2 bypass is connected to the tubing at a position below the packer.
- 1 9. A method of treating a subsurface formation, comprising:
2
3 locating a diverter valve in a tubing through which a fluid is produced;
4
5 engaging a treatment fluid flow path with the tubing; and
6
7 utilizing the diverter valve to obstruct flow in the tubing while enabling
8 flow along the treatment fluid flow path.
- 1 10. The method as recited in claim 9, further comprising pumping a treatment fluid
2 through a portion of the tubing and then along the treatment fluid flow path.
3
- 1 11. The method as recited in claim 9, further comprising coupling a completion to the
2 tubing.
3
- 1 12. The method as recited in claim 11, further comprising actuating the diverter valve
2 to remove the obstruction in the tubing and to block flow along the treatment fluid
3 flow path.
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- 1 13. The method as recited in claim 12, further comprising producing a fluid upwardly
2 from the completion, through the tubing and past the diverter valve.
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- 1 14. The method as recited in claim 11, wherein coupling comprises coupling and
2 electric submersible pumping system to the tubing.
3
- 1 15. The method as recited in claim 12, wherein actuating comprises moving a flapper
2 from a position closing the tubing to a position closing the treatment fluid flow
3 path.
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- 1 16. The method as recited in claim 11, wherein engaging comprises connecting a
2 bypass tube to the tubing to direct a treatment fluid past the completion.
3
- 1 17. A system for pumping fluid in a wellbore with a completion deployed in the
2 wellbore on a tubing, comprising:
3
4 a diverter valve controllable to enable flow of a production fluid through
5 the tubing; and
6
7 a bypass conduit in fluid communication with the diverter valve to isolate
8 the completion from well treatment fluid introduced through the diverter valve.
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- 1 18. The system as recited in claim 17, wherein the diverter valve is mounted to the
2 tubing.
- 1 19. The system as recited in claim 18, further comprising a packer through which the
2 tubing extends.
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- 1 20. The system as recited in claim 17, further comprising a completion having a
2 submersible pump powered by a submersible motor.
- 1 21. The system as recited in claim 18, wherein the diverter valve comprises a flapper
2 movable for selective closure of the tubing string and the bypass conduit.

- 1 22. The system as recited in claim 20, wherein the bypass conduit comprises a tube
2 extending from the diverter valve to a position past an opposite end of the
3 completion.
- 1 23. A system for treating a well, comprising:
2
3 means for producing a wellbore fluid;
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5 means for carrying the wellbore fluid or a well treatment fluid; and
6
7 means for bypassing the means for producing when the well treatment
8 fluid is introduced into the well.
- 1 24. The system as recited in claim 23, wherein the means for producing comprises an
2 electric submersible pumping system.
- 1 25. The system as recited in claim 23, wherein the means for carrying comprises a
2 tubing.
- 1 26. The system as recited in claim 23, wherein the means for bypassing comprises a
2 diverter valve coupled to bypass conduit.